REMARKS/ARGUMENTS

The Office Action mailed January 29, 2003 has been carefully reviewed.

Reconsideration of this application, as amended and in view of the enclosed Declarations and the following remarks, is respectfully requested.

35 USC §103(a) Rejection

Claims 1-9 were rejected under 35 U.S.C. §103(a) as allegedly being unpatentable over Kocher et al. in view of Scheps.

Applicants Response to the 35 USC §103(a) Claim Rejections

Claims 1, 3, 4, 5, 6, and 9 have been amended. Claims 2, 7, and 8 are cancelled. It would not be obvious within the meaning of 35 USC §103(a) to combine Kocher et al. and Scheps as a basis for rejecting amended claims 1, 3, 4, 5, 6, and 9 now present in the subject application. The Kocher et al. and Scheps references fail to disclose many of the elements and steps of amended claims 1, 3, 4, 5, 6, and 9. For example, the Kocher et al. and Scheps references fail to disclose the following elements and steps of the amended claims:

> a first semiconductor pumping device operatively connected to said lasing chamber for optically exciting said trivalent titanium ions dissolved in said liquid host within said lasing chamber, said first semiconductor pumping device comprising at least one semiconductor diode for optically exciting said trivalent titanium ions dissolved in said liquid host within said lasing chamber,
>
> a second semiconductor pumping device operatively connected to said lasing chamber for optically exciting said trivalent titanium ions dissolved in said liquid host within said lasing chamber, said second semiconductor pumping device comprising at least one semiconductor diode for optically exciting said trivalent titanium ions dissolved in said liquid host within said lasing chamber (Amended Claim 1)

a first closed loop circulation system for circulating said trivalent titanium ions dissolved in a liquid host into and out of said first lasing chamber and said second lasing chamber,

a second closed loop circulation system for circulating said trivalent titanium ions dissolved in a liquid host into and out of said first lasing chamber and said second lasing chamber (Amended Claim 1)

said first closed loop circulation system includes a first flow channel and said second closed loop circulation system includes a second flow channel, said first flow channel and said second flow channel being of substantially equal length, wherein said system for correcting said thermally induced optical phase errors includes said first closed loop circulation system for circulating said trivalent titanium ions dissolved in a liquid host and said second closed loop circulation system for circulating said trivalent titanium ions dissolved in a liquid host through said first flow channel and said second flow channel, whereby said liquid host is divided into two equal lengths and placed in series in said lasing chamber, and wherein said first flow channel and said second flow channel are arranged in opposite directions (Amended Claim 5)

filling said lasing chamber with lasing liquid containing trivalent titanium ions dissolved in a liquid host (Amended Claim 6)

optically exciting said lasing liquid in the 800 to 900 nm region with a first semiconductor diode and optically exciting said lasing liquid in the 800 to 900 nm region with a second semiconductor diode to provide a powerful laser beam, thermally induced optical phase errors being produced by said steps of optically exciting said lasing liquid in the 800 to 900 nm region with a first semiconductor diode and optically exciting said lasing liquid in the 800 to 900 nm region with a second semiconductor diode (Amended Claim 6)

correcting said thermally induced optical phase errors by circulating said lasing liquid containing trivalent titanium ions dissolved in a liquid host into and out of said lasing chamber and dividing said circulating lasing liquid into two equal lengths and

placing said two equal lengths in series arranged in opposite directions (Amended Claim 6)

circulating said lasing liquid containing trivalent titanium ions dissolved in a liquid host through a heat exchanger to cool said lasing liquid containing trivalent titanium ions dissolved in a liquid host (Amended Claim 6)

a first semiconductor pumping device operatively connected to said optical cavity for optically exciting said trivalent titanium ions dissolved in a liquid host within said optical cavity, said first semiconductor pumping device comprising at least one semiconductor diode for optically exciting said trivalent titanium ions in the 800 to 900 nm region,

a second semiconductor pumping device operatively connected to said optical cavity for optically exciting said trivalent titanium ions dissolved in a liquid host within said optical cavity, said second semiconductor pumping device comprising at least one semiconductor diode for optically exciting said trivalent titanium ions in the 800 to 900 nm region (Amended Claim 9)

a first closed loop circulation system that provides a closed loop for circulating said lasing liquid containing trivalent titanium ions dissolved in a liquid host into and out of said optical cavity,

a second closed loop circulation system that provides a closed loop for circulating said lasing liquid containing trivalent titanium ions dissolved in a liquid host into and out of said optical cavity, said first closed loop circulation system and said second closed loop circulation system including a pump and a heat exchanger (Amended Claim 9)

The Kocher et al. and Scheps references do not show the claimed combination, there is no suggestion in the Kocher et al. and Scheps references to form a proper combination, and the Kocher et al. and Scheps references do not provide a teaching of the claimed combination. Under MPEP §2142, there are three requirements to establish a prima facie case of obviousness. (1) There must be some suggestion or motivation, either in the references themselves or in the

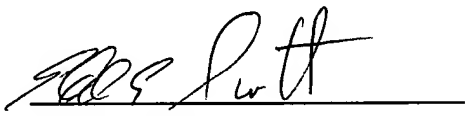
knowledge generally available to one of ordinary skill in the art, to modify the references or to combine reference teachings. (2) There must be a reasonable expectation of success. (3) The prior art reference (or references when combined) must teach or suggest all the claim limitations.

The Kocher et al. and Scheps reference do not show or suggest many of the claim elements and steps. The Kocher et al. and Scheps references do not provide a teaching of a combination to provide the missing claim elements and steps. There is no suggestion or motivation in the Kocher et al. and Scheps references to combine the references. Under MPEP §2143.01, "Obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the references themselves or in the knowledge generally available to one of ordinary skill in the art." In re Fine, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988); In re Jones, 958 F.2d 347, 21 USPQ2d 1941 (Fed. Cir. 1992). It should be noted that the teaching or suggestion to make the claimed combination and the reasonable expectation of success must both be found in the prior art, and not based on applicant's disclosure. In re Vaeck, 947 F.2d 488, 20 USPQ2d 1438 (Fed. Cir. 1991).

SUMMARY

The undersigned respectfully submits that in view of the foregoing amendments and the foregoing remarks the rejections of the claims raised in the Office Action dated January 29, 2003 have been fully addressed and overcome. The present application is believed to be in condition for allowance. It is respectfully requested that this application be reconsidered, that the claims be allowed, and that this case be passed to issue. If it is believed that a telephone conversation would expedite the prosecution of the present application, or clarify matters with regard to its allowance, the Examiner is invited to call the undersigned attorney at (925) 424-6897.

Respectfully submitted,



Eddie E. Scott
Attorney for Applicant
Registration No. 25,220
Tel. No. (925) 424-6897

Livermore, California
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